This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claims 1-99 (cancelled)

Claim 100 (currently amended): A method for the treatment of a Hepatitis C virus infection in a host, comprising administering an antivirally effective amount of a β -D nucleoside compound of the structure:

or a pharmaceutically acceptable salt or prodrug thereof, optionally in a pharmaceutically acceptable carrier or diluent.

Claim 101 (currently amended): A method for the treatment of a Hepatitis C virus infection in a host, comprising administering an antivirally effective amount of a β -D nucleoside compound of the structure:

or a pharmaceutically acceptable salt or prodrug thereof, optionally in a pharmaceutically acceptable carrier or diluent.

Claim 102 (currently amended): A method for the treatment of a Hepatitis C virus infection in a host, comprising administering an antivirally effective amount of a β-D nucleoside compound of the structure:

or a pharmaceutically acceptable salt or prodrug thereof, optionally in a pharmaceutically acceptable carrier or diluent.

Claims 103-129 (canceled)

Claim 130 (currently amended): The method of any one of claims 83, 86, 89, 90, 100, 101, 102, or 140-145 140-152, wherein the pharmaceutically acceptable carrier is suitable for oral delivery.

Claim 131 (currently amended): The method of any one of claims 83, 86, 89, 90, 100, 101, 102, or 140-145 140-152, wherein the pharmaceutically acceptable carrier is suitable for intravenous delivery.

Claim 132 (currently amended): The method of any one of claims 83, 86, 89, 90, 100, 101, 102, or 140-145 140-152, wherein the pharmaceutically acceptable carrier is suitable for parenteral delivery.

Claim 133 (currently amended): The method of any one of claims 83, 86, 89, 90, 100, 101, 102, or 140-145 140-152, wherein the pharmaceutically acceptable carrier is suitable for intradermal delivery.

Claim 134 (currently amended): The method of any one of claims 83, 86, 89, 90, 100, 101, 102, or 140-145 140-152, wherein the pharmaceutically acceptable carrier is suitable for subcutaneous delivery.

Claim 135 (currently amended): The method of any one of claims 83, 86, 89, 90, 100, 101, 102, or 140-145 140-152, wherein the pharmaceutically acceptable carrier is suitable for topical delivery.

Claim 136 (currently amended): The method of any one of claims 83, 86, 89, 90, 100, 101, 102, or 140-145 140-152, wherein the compound is in the form of a dosage unit.

Claim 137 (previously presented): The method of claim 136, wherein the dosage unit contains 10 to 1500 mg of the compound.

Claim 138 (previously presented): The method of claim 136, wherein the dosage unit is a tablet or capsule.

Claim 139 (currently amended): The method of any one of claims 83, 86, 89, 90, 100, 101, or 102, or 146-152 wherein the host is a human.

Claim 140 (currently amended): A method for the treatment of a Hepatitis C virus infection in a human, comprising administering an antivirally effective amount of a β-D nucleoside compound of the structure:

or a pharmaceutically acceptable salt or ester thereof.

Claim 141 (currently amended): A method for the treatment of a Hepatitis C virus infection in a human, comprising administering an antivirally effective amount of a β-D nucleoside compound of the structure:

or a pharmaceutically acceptable salt or ester thereof.

Claim 142 (currently amended): A method for the treatment of a Hepatitis C virus infection in a human, comprising administering an antivirally effective amount of a β-D nucleoside compound of the structure:

or a pharmaceutically acceptable salt or ester thereof.

Claim 143 (currently amended): A method for the treatment of a Hepatitis C virus infection in a human, comprising administering an antivirally effective amount of a β-D nucleoside compound of the structure:

or a pharmaceutically acceptable salt thereof, optionally in a pharmaceutically acceptable carrier.

Claim 144 (currently amended): A method for the treatment of a Hepatitis C virus infection in a human, comprising administering an antivirally effective amount of a β-D nucleoside compound of the structure:

or a pharmaceutically acceptable salt thereof, optionally in a pharmaceutically acceptable carrier or diluent.

Claim 145 (currently amended): A method for the treatment of a Hepatitis C virus infection in a human, comprising administering an antivirally effective amount of a β-D nucleoside compound of the structure:

or a pharmaceutically acceptable salt thereof, optionally in a pharmaceutically acceptable carrier or diluent.

Claim 146 (new): A method for the treatment of a hepatitis C virus infection in a host, comprising administering an anti-virally effective amount of a β-D nucleoside compound of formula:

or a pharmaceutically acceptable salt thereof, optionally in a pharmaceutically acceptable carrier or diluent, wherein:

Base is a pyrimidine base;

R¹ is independently H; phosphate; stabilized phosphate prodrug; acyl; alkyl; sulfonate ester and benzyl, wherein the phenyl group is optionally substituted with one or more substituents; a lipid; an amino acid; a carbohydrate; a peptide; a cholesterol; or other pharmaceutically acceptable leaving group which when administered *in vivo* is capable of providing a compound wherein R¹ is independently H or phosphate; and

 R^4 is alkyl, alkynyl, -C(O)O(alkyl), -C(O)O(lower alkyl), -O(acyl), -O(lower acyl), -O(alkyl), -O(lower alkyl), -O(alkenyl), halogen, NO₂, NH₂, -NH(lower alkyl), -NH(acyl), -N(lower alkyl)₂, -N(acyl)₂; and

R⁵ and R⁶ are independently OR¹, hydroxy, alkyl, azido, cyano, alkenyl, alkynyl, Brvinyl, -C(O)O(alkyl), -C(O)O(lower alkyl), -O(acyl), -O(lower acyl), -O(alkyl), -O(alkyl), -O(alkyl), -O(alkyl), -N(lower alkyl), -N(lower alkyl), -N(acyl)₂;

R⁷ is H, alkyl, chlorine, bromine, or iodine; and X is O, S, SO₂, or CH₂.

Claim 147 (new): The method of claim 146, wherein the pyrimidine base is selected from the group consisting of thymine, cytosine, 5-fluorocytosine, 5-methylcytosine, 6-aza-pyrimidine, including 6-azacytosine, 2- and/or 4-mercaptopyrmidine, uracil, 5-halo-uracil, C⁵-alkylpyrimidines, C⁵-benzylpyrimidines, C⁵-halopyrimidines, C⁵-vinylpyrimidine, C⁵-acetylenic pyrimidine, C⁵-acyl pyrimidine, C⁵-hydroxyalkyl purine, C⁵-amidopyrimidine, C⁵-cyanopyrimidine, C⁵-nitropyrimidine, or C⁵-aminopyrimidine.

Claim 148 (new): The method of claim 146, wherein R⁴ is methyl, and R⁵ and R⁶ are hydroxyl.

Claim 149 (new): The method of claim 146, wherein the compound is in the form of a dosage unit.

Claim 150 (new): The method of claim 146, wherein the compound is in substantially pure form.

Claim 151 (new): The method of claim 146, wherein the compound is at least 90% by weight free of the β-L-isomer.

Claim 152 (new): The method of claim 146, wherein the compound is at least 95% by weight free of the β-L-isomer.

Claim 153 (new): The method of claim 146, wherein R⁴ is alkyl.

Claim 154 (new): The method of claim 146, wherein R⁵ is hydroxy.

Claim 155 (new): The method of claim 146, wherein R⁶ is hydroxy.

Claim 156 (new): The method of claim 146, wherein R⁷ is H.

Claim 157 (new): The method of any one of claims 100-102 or 140-145, wherein the compound is at least 90% by weight free of the β-L-isomer.

Claim 158 (new): The method of any one of claims 100-102 or 140-145, wherein the compound is at least 95% by weight free of the β-L-isomer.

Claim 159 (new): The method as in any one of claims 100-102 or 145-150, wherein the compound is in substantially pure form.